DEPARTMENT OF PUBLIC SERVICE REGULATION BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MONTANA

IN THE MATTER OF THE APPLICATION)	REGULATORY DIVISION
of MONTANA-DAKOTA UTILITIES CO.,)	
a Division of MDU Resources Group, Inc.,)	DOCKET NO. D2012.9.100
for Authority to Establish Increased Rates for)	
Natural Gas Service)	OPENING BRIEF

STATEMENT OF THE CASE

A. Introduction

On September 26, 2012, Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc. ("Montana-Dakota"), filed an application with the Commission for authority for a general increase in the rates its is authorized to charge its Montana customers for natural gas service in Montana. The application, if granted in its entirety, would have resulted in an overall annual revenue increase of \$3,457,412, a 5.9% overall increase in rates. The application was prepared and filed in accordance with the Commission's minimum filing standards governing general rate case filings by gas utilities. ARM 38.5.101 *et seq*. Montana-Dakota's application was denominated PSC Docket D2012.9.100. One party intervened in the docket; the Montana Consumer Counsel ("MCC").

The MCC engaged in extensive discovery in the docket. The MCC, together with the Staff of the Commission, conducted an on-site audit of the Montana-Dakota rate filing at its general offices in Bismarck, North Dakota.

The MCC, on February 25, 2013, pre-filed the testimony of its expert witnesses. The MCC, in its pre-filed testimony, advocated a general rate increase of \$421,966, but at hearing

agreed with certain corrections to its own cost of service presentation which raised its conceded revenue deficiency to \$921,249.1

Montana-Dakota's application in this docket for a general rate increase was finally heard by the Commission in a contested case hearing. The hearing was held on August 5-6, 2013, in Billings, Montana, the largest Montana city in the Company's service territory. With small exception, no one from the public appeared at the hearing to oppose the rate increase requested by the Company.²

B. Summary of Testimony

1. Montana-Dakota's Case in Chief.

Ten witnesses testified on behalf of Montana-Dakota in its case in chief. Mr. Frank Morehouse, the new President of Montana-Dakota, adopted the pre-filed Direct Testimony of Mr. David Goodin, the former President of the Company, and provided a summary of the Company's rate filing. MDU Ex. 2. Tr. 33. Mr. Jay Skabo presented in his Direct Testimony an

¹ MCC witness Clark, after reviewing the rebuttal testimony of MDU witness Mulkern, concurred with the MDU position on several of his proposed adjustments. Tr. 414-415. The table below shows what Montana-Dakota believes is the revenue impact of the agreed upon changes to the MCC conceded revenue deficiency.

MCC Revenue Requirement	\$421,966	
Corrections:		MDU Ex. 16
Labor	11,275	p. 2
Postage	7,943	p. 3
Board of Director meetings	7,010	p. 3
Landfill - income taxes	406,517	p. 5
landfill - ADITs	66,538	p. 6
Adjusted	\$921,249	

² The exception was the testimony of several realtors/property managers who took the occasion to address the Commission regarding their disputes with Montana-Dakota over Continuous Service Agreements and the legislative battle over House Bill 477, enacted into law as Chapter 391, 2013 Session Laws of Montana. Despite their strong feelings on those two subjects, they are not issues in this case.

overview of the Montana-Dakota natural gas operations and organizational structure. MDU Ex. 3. Ms Anne Jones explained in her Direct Testimony the underlying basis for employee compensation at Montana-Dakota. MDU Ex. 4. The overall revenue requirement in the case was presented in the Direct Testimony of Ms. Rita Mulkern. MDU Ex. 15. Class cost allocation and rate design was presented in the Direct Testimony of Ms. Tamie Aberle. MDU Ex. 17. The cost of equity capital for Montana-Dakota was presented in the Direct Testimony of Mr. J. Stephen Gaske, MDU Ex. 9, while the Company's capital structure and cost of debt was presented in the Direct Testimony of Mr. Garret Senger, MDU Ex. 5. MDU's witness Mr. Morman supported, in his Direct Testimony, the inclusion of the Billings Landfill Project in rate base. MDU Ex. 7. MDU's witness Mr. Gardner supported, in his Direct Testimony the inclusion of Montana-Dakota's new customer information system in rate base, MDU Ex. 11. Mr. Earl Robinson presented the company's proposal on depreciation rates in his Direct Testimony, MDU Ex. 13.

2. MCC Case.

Four witnesses testified on behalf of the MCC in its case. Mr. Albert Clark presented the MCC position on the overall Montana-Dakota revenue requirement, including proposed adjustments. MCC Ex. 2. MCC's witness Dr. Wilson presented the MCC position on the cost of equity capital for Montana-Dakota, as well as is capital structure. MCC Ex. 1. Mr. Jacob Pous was the MCC witness on depreciation. MCC Ex. 3. Mr. George Donkin was the MCC witness on cost allocation and rate design.

3. Montana-Dakota's Rebuttal Case.

Seven of Montana-Dakota's witness also testified in rebuttal: Mr. Senger, MDU Ex. 6; Mr. Morman, MDU Ex. 8; Mr. Gaske, MDU Ex. 10; Mr. Gardner, MDU Ex. 12; Mr. Robinson, MDU Ex. 14, Ms. Mulkern, MDU Ex. 16; and Ms. Aberle, MDU Ex. 18.

C. Case Overview

The primary issues in this case are the cost of equity capital, capital structure, the inclusion of the Billings Landfill Project in ratebase, the inclusion of the new customer information system in ratebase, depreciation, cost allocation, and rate design. Each of these primary issues are discussed individually below.

There are other, smaller, issues between the two parties which are adequately covered in the testimony, and do not require separate address in post hearing briefs. Examples would be the correcting adjustment to the MCC sponsored revenue requirement relating to the calculation of post test year plant in service, Rebuttal Testimony of Rita Mulkern, MDU Ex. 18 at p. 7; and the negative adjustment to the revenue requirement to eliminate double counting of interest, MDU Ex. 18 at p. 5.

PRIMARY ISSUES

I. Cost of Equity Capital.

The Commission's most recent final rate order in a Montana-Dakota general rate case for its Montana gas operations was based upon a cost of equity capital of 12%. PSC Docket D95.7.90, Order 5856b, ¶ 27. In its Application in this docket, Montana-Dakota requested a reduction in its authorized return on equity capital to 10.50%. The Commission's interim order in this docket has already lowered Montana-Dakota's authorized return to the requested 10.5%. Interim Order 7254a, ¶ 15.

Montana-Dakota presented its cost of equity capital to the Commission in this proceeding through the Direct Testimony of Mr. Stephen Gaske, MDU Ex. 9, as well as his Rebuttal Testimony, MDU Ex. 10. The MCC, through the testimony of its witness Dr. John Wilson, proposed a much lower cost of equity capital, 9%. MCC Ex. 1. It is important to put the advocacy of MCC in this case in its proper perspective.

Montana-Dakota and NorthWestern Energy ("NWE") filed nearly simultaneous applications for general rate increases for their Montana gas operations with the Commission.³ The MCC hired Dr. Wilson to perform cost of capital studies for both companies. He prepared contemporaneous cost of capital studies using the same methodology and data sources.⁴ He recommended the same cost of equity capital for both companies – 9.0%.

The Commission has already issued its decision in the NWE rate case, determining that the cost of equity capital for NWE's Montana gas operations is 9.8%. PSC Docket D2012.9.94, Order 7249e, ¶s 27-28. Since the sworn testimony of Dr. Wilson in the Montana-Dakota and NWE rate cases is both companies have the same cost of equity capital, the continued advocacy by the MCC for a Commission order in this docket establishing a significantly lower cost of equity capital for Montana-Dakota than NWE is inexplicable. While the MCC is free to destroy its own credibility, it should not expect the Commission to follow suit.

Not only is the sworn testimony of Dr. Wilson that Montana-Dakota and NWE have the same cost of capital, his cost of capital studies actually support a <u>higher</u> cost of equity capital for Montana-Dakota than for NWE. This Commission relies heavily on DCF analysis in making its cost of equity capital determinations:

³ Montana-Dakota filed its application on September 26, 2012. NWE filed its application on September 29, 2012.

⁴ His cost of capital study for NWE was filed with the Commission on February 8, 2013, and his cost of capital study for Montana-Dakota was filed with the Commission on February 25, 2013.

The Commission has consistently preferred the use of DCF analysis in establishing a fair rate of return because DCF analysis is superior to all other procedures.

In the Matter of the Application of Montana-Dakota Utilities for Authority to Establish Increased Rates for Electric Service, PSC Docket 86.5.28, Order 5210b, Finding of Fact 40. Dr. Wilson's DCF analyses in this docket and the NWE docket clearly shows a higher cost of equity capital for Montana-Dakota than for NWE.

Dr. Wilson's testimony in both dockets contains an internal exhibit which summarizes the results of his cost of equity studies. In this docket, it is MCC Ex. 1, internal Exhibit__(JW-8), attached as Appendix 1 to this brief. The same internal exhibit in the NWE docket is MDU Ex. 20, attached as Appendix 2 to this brief. Dr. Wilson performed three DCF analysis in each docket, which he labeled his constant growth models in the NWE docket, using his measures of earning growth, dividend growth and book value growth. The average mid-point of those three study methodologies indicated that the cost of equity capital was 40 basis points higher for Montana-Dakota than for NWE - 8.48% for Montana-Dakota,⁵ and 8.08% for NWE.⁶ He performed what he labeled a "fundamental DCF" in each docket, which indicated that the cost of equity capital for Montana-Dakota was 30 basis points higher for Montana-Dakota than for NWE - 8.96% for Montana-Dakota and 8.65% for NWE.⁷

Although there are several methodological differences between Montana-Dakota's cost of capital witness, Mr. Gaske, and the MCC's cost of capital witness, Dr. Wilson, their DCF results, using the same proxy companies, generally produce similar results in terms of the

JA:24-151 -6- OPENING BRIEF

⁵ 8.91 + 8.08 + 8.45/3 = 8.48

⁶ 8.61 + 7.44 + 8.18 = 8.08. Dr. Wilson presented "ranges" in the NWE docket for each calculation. MDU Ex. 20. However, it is a simple math exercise to calculate the mid-points of his ranges.

⁷ Dr. Wilson presented a "range" of results in the NWE docket, between 8.5% and 8.8%. MDU ex. 20. The mid-point of the range is 8.65%.

range of returns indicated for the proxy companies. A critical difference in their analyses is their assessments of the risks of Montana-Dakota relative to the proxy companies. Dr. Gaske assesses this risk to be high because of the small size of Montana-Dakota's jurisdictional operations in Montana, and the relatively undiversified nature of the economy in its eastern Montana service territory. As a result, he recommends a rate of return on common equity near the high end of the results, but within the range indicated by the studies. Dr. Wilson argues against considering the risks of Montana-Dakota's jurisdictional operations relative to the proxy companies, and argues instead that the Commission should consider the relative risk of MDU Resources, Inc., which is a highly diversified company with oil and gas production interests and construction-related operations around the United States.

Since it is the Montana operations of Montana-Dakota which are subject to the Commission's jurisdiction in this proceeding, it is clearly the risk of those operations, relative to the proxy companies, which must be considered in a DCF analysis, something the Commission correctly decided in the last Montana-Dakota gas case:

- 23. The ROE witnesses also disagree in their conclusions regarding the risks associated with MDU's gas operations. Hill asserts that MDU's gas operations are less risky than the companies in his sample group, while Gaske argues that MDU is more risky than the companies in his sample group. As a result of their risk conclusions the witnesses have increased and decreased their recommended returns above and below the returns for that of their respective sample companies.
- 24. Hill considers the financial risk of MDU and the cost of capital for MDU Resources in making his risk conclusions. Hill, direct, pp.46-47, states the following in support of his risk conclusion and placement of MDU at the lower end of the equity range:

MDU's financial risk is similar to, but somewhat lower than, that of the gas distributors studied herein, as noted previously in my testimony. That, in addition to the fact that the cost of equity of MDU Resources -- MDU's source of equity capital - - appears to be considerably below that of a gas distributor, would indicate that a point estimate in the lower end of the range of equity cost estimates for gas distributors would be reasonable for ratemaking purposes. However, the financial risk

differences between MDU and the sample gas distributors are relatively small and the equity cost estimates for MDU Resources are based on an analysis of the market data of only one company and are, statistically, less reliable than the equity cost estimates for the gas distributors. Therefore, an appropriate equity return for the Company falls at the midpoint of that market – determined range, or 10.75%.

This indicates that Hill's criteria for using the lower equity return limit is quite meager, and dependent on his cost of equity capital for MDU Resources, which is less reliable than that for the sample group.

25. Gaske argues that MDU is riskier than the companies in his sample group. His arguments are contained in his direct testimony, pp. 29-39. In his conclusions on risk he provides the following reasons why MDU is riskier than his sample group:

There are considerable risks associated with investments in gas distribution companies and these risks have increased in recent years. In my opinion, Montana-Dakota's overall risks are greater than those of any of the companies in the comparison group. The considerably higher business risk is due primarily to the small size of the Montana jurisdictional natural gas operations relative to the size of the comparison companies and the perceived risks of bypass due to the unusually large amount of direct competition with another gas utility. Montana Dakota's Montana operations also face regulatory risks that are above average relative to those of the comparison group. In addition, Montana-Dakota's financial risks are clearly greater than the average financial risks faced by the comparison companies.

- 26. The Commission is persuaded that Gaske's conclusions regarding increased risk, in comparison to the sample group, appear to be valid for financial risk and, to a limited extent, for business risk. MDU, in comparison to the sample group average, is financially more risky because it has a higher magnitude of debt in its capital structure and its bond rating is lower. In the area of business risk MDU's smaller revenue base, compared to that of the sample group, increases its risk, because MDU has a smaller proportion of return available to absorb fixed costs during period of economic downturns....
- 27. ... The Commission's acceptance of the argument that MDU has greater financial and business risk than the sample group of companies, entitles MDU to an increase in its ROE above that found reasonable for the sample group. ... [Emphasis added].

In The Matter of Montana-Dakota Utilities Co. Application for Authority to Increase Rates for Natural Gas Service in Montana, PSC Docket D95.7.90, Order 5856b, ¶s 23-27 (emphasis supplied).

The total assets of the Montana gas operations are a tiny fraction of the total assets of the proxy companies - \$43.2 million for Montana-Dakota compared to a median of \$2.99 billion for the proxy companies. MDU Ex. 9, internal Exhibit__(JSG-2), Schedule 2, p. 1 of 9. The diversity of the economy in Eastern Montana is low relative to the large urban areas served by the proxy companies. MDU Ex. 9 at p. 27-29. Accordingly, the Commission should look to the high end of the DCF results in determining the cost of capital for Montana-Dakota in this proceeding. Tr. at pp. 151-152.

The 10.50% return on equity requested by Montana-Dakota in this docket is comfortably with the range of DCF results produced by either Montana-Dakota witness Gaske, or MCC witness Wilson. Both sets of studies showed proxy costs of equity capital ranging well above the 10.5% requested by Montana-Dakota:

Gaske Retention Growth DCF (MDU-9, Exhibit JSG-2, Schedule 2. Page 6):

AGL Resources Inc.

11.35%

New Jersey Resources Corp.

11.12%

South Jersey Industries, Inc.

11.48%

Gaske Blended Growth DCF (MDU-9, Exhibit JSG-2, Schedule 2. Page 8):

South Jersey Industries, Inc.

10.55%

Wilson Earnings Growth DCF (MCC-1, Exhibit JWW-1):

South Jersey Industries, Inc.

11.1%

Wilson Dividend Growth DCF (MCC-1, Exhibit JWW-2):

South Jersey Industries, Inc.

12.6%

Southwest Gas Corp.

11.1%

Wilson Fundamental Growth DCF (MCC-1, Exhibit JWW-4):

New Jersey Resources

11.0

The 10.5% return on equity requested by Montana-Dakota in this proceeding is not only well within the ranges of the cost of equity capital estimates of both Montana-Dakota witness Gaske and MCC witness Wilson, but consistent with the Commission's recently issued decision in NWE's general rate case, PSC Docket D2013.9.94, Order 7249e.

II. Capital Structure.

Montana-Dakota proposed the following capital structure:

_	Capital Ratio	Cost	Weighted Cost of Capital
Long Term Debt	39.691%	6.846%	2.717%
Short Term Debt	4.750%	1.399%	0.66%
Preferred Stock	2.172%	4.583%	.100%
Common Equity	53.387%	10.50%	5.606%
Required Rate of Return	100.000%		8.489%

Direct Testimony of Garret Senger, MDU Ex. 5 at p. 4. MCC witness Wilson proposed a hypothetical 50/50 capital structure which reduced the equity component to 50%, and correspondingly raised the long term debt component to 43.078%. MCC Ex. 1 at pp 38-39.

Although Montana-Dakota itself targets a 50/50 capital structure, MDU Ex. 5 at p. 5, the Commission should not use the hypothetical capital structure proposed by Dr. Wilson. Montana-Dakota's equity ratio has increased in recent years because of federal bonus tax depreciation on capital projects. Rebuttal Testimony of Garret Senger, MDU Ex. 6 at p. 2. Absent bonus tax depreciation, Montana-Dakota's equity ratio would be lower, but its rate base would be higher. *Id.* Dr. Wilson's hypothetical capital structure would penalize Montana-Dakota for correctly

managing its capital while taking advantage of federal legislation to the benefit of its customers.

Id.

III. Billings Landfill Project.

The Billings Landfill Project is a joint venture between Montana-Dakota and the City of Billings. Rebuttal Testimony of Mr. Robert Morman ("Morman Rebuttal"), MDU Ex.8, p. 2. It represents an \$11 million investment by Montana-Dakota, of which Montana's allocated share is approximately \$3 Million. *Id.* It provides a source of system supply which is conveniently located near Billings, Montana, the largest single city served by Montana-Dakota in its four state service territory.

The Billings landfill was one of two landfills considered by Montana-Dakota for development as a source of gas supply.⁸ Direct Testimony of Mr. Robert Morman ("Morman Direct"), MDU Ex. 7, at p. 3. Montana-Dakota retained Wenck Engineering, a firm experienced in the development of such projects, to assist it in evaluating the Billings landfill as a source of gas supply. *Id.*; MDU Ex. 8, at p. 6. Wenck performed an initial evaluation of the Billings landfill, followed by the drilling of test wells in the landfill. MDU Ex. 7, at p. 4. The three test wells indicated there was a supply of gas in the landfill sufficient to justify the development of the landfill as a source of gas supply. MDU Ex. 8, at p. 8.

When the Billings landfill was initially evaluated as a source of system supply, the commodity cost of gas was in excess of \$6/Dkt, and the Henry Hub index had averaged \$7.45/Dkt for the previous five years. MDU Ex. 7, at p. 3. By the time Montana-Dakota formally evaluated the project, the commodity cost of gas was exceeding \$10/Dkt, and there was concern, both regionally and nationally, about the availability and price of natural gas. *Id.*, at p. 4. The cost of gas at the Henry Hub reached \$13/Dkt in the summer of 2008. MDU Ex. 8, at p.

⁸ The other was Rapid City, South Dakota.

7. Based upon the work performed by Wenck, it was determined that the Billings landfill could be developed as a source of system supply for around \$6.00/Dkt. MDU Ex. 7, at 5. Tr. 122. When Montana-Dakota committed to the project, the commodity cost of gas was \$7/Dkt. MDU Ex. 8, at p. 9.

The estimated cost of developing the Billings landfill into a source of gas supply, using the information from the test wells, was based upon projected annual production in the neighborhood 460,000 Dkt. Tr. 122. To date, annual production from the Billings Landfill Project has been about one third of the projected volume. MDU Ex. 7, at p. 6. The problem has been in the area of the Billings landfill designated Phase 1. MDU Ex. 8, at p. 10. The production wells in Phase 1 have shown, to date, a much higher percentage of dry construction materials than reflected in the Phase 1 test well. *Id.* Montana-Dakota has switched from vertical wells to horizontal wells to increase gas flows and better match the operations of the Billings landfill. *Id.*, at pp. 11-12.

MCC witness Clark developed his revenue requirement in this case based upon a total exclusion of the Billings Landfill Project from rate base. His sole rationale for the proposed exclusion is set forth in the following excerpt of his testimony:

Given the current level of output from the project the result is a gas cost of between \$17 to over \$19 per dekatherm (Dkt). The resulting unit cost is out-of-market by a factor of approximately 5 and exceeds the originally projected unit costs by a factor of approximately 4.

I am proposing to remove all investment and operating expenses associated with this exceedingly costly project. Since the gas is being included in MDU's system supply and since MDU is paying the City of Billings a royalty based on the CIG Index price, I recommend that the volumes produced at the project be priced at the CIG Index price in the gas tracker cases.

MCC Ex. 2, at p 13. Mr. Clark did not testify that Montana-Dakota acted imprudently in its development of the Billings Landfill Project. The basis for his exclusion was a simple

comparison of the current price of gas in the field to the then current unit price of gas from the Billings Landfill Project at then current production levels.

The Commission is required by the Fifth Amendment to the United States Constitution to allow a utility to: "earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made ... in other business undertakings which are attended by corresponding risks and uncertainties...." *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679, 690 (1923). The proposed exclusion of the Billings Landfill Project from rate base proposed by MCC witness Clark does not meet that standard, because it would create an impermissible "heads I win, tails you lose" regulatory paradigm.

Assume, for example, that the price of natural gas in the field had remained high, or continued to increase as it had when the Billings Landfill Project was conceived. Regardless how high the market price of gas in the field, relative to the unit price of gas produced by the Billings Landfill Project, Montana-Dakota would not be allowed to include the Billings Landfill Project in rates at anything other than its original cost of construction. Section 69-3-109, MCA.⁹ Yet, according to Mr. Clark, if the market price of gas falls below the unit price of gas produced by the Billings Landfill Project, all Montana-Dakota is entitled to receive for its investment in the Billings Landfill Project is the equivalent of the market price of gas. MCC Ex. 2, at p. 13. That kind of asymmetrical standard is prohibited by the Fifth Amendment to the United States Constitution:

Consequently, a State's decision to arbitrarily switch back and forth between methodologies in a way which required investors to bear the risk of bad

⁹ "The commission may, in its discretion, investigate and ascertain the value of the property of each public utility actually used and useful for the convenience of the public. The commission is not bound to accept or use any particular value in determining rates. However, if any value is used, the value may not exceed the original cost of the property...." (Emphasis supplied). Section 69-3-109, MCA.

investments at some times while denying them the benefit of good investments at others would raise serious constitutional questions.

Duquense Light Company v. Barsch, 488 U.S. 299, 315 (1989).

If the regulatory standard proposed by Mr. Clark was adopted, it would make Commission regulated firms dramatically more risky than unregulated firms. Unregulated firms don't receive their "cost of capital" on an investment if it does not fare well in the marketplace. But, they are also not constrained by their "cost of capital" when they make good investments. Both their downside, and their upside, are greater than that of a PSC regulated firm. However, under the standard proposed by Mr. Clark, Commission regulated firms are to be constrained by their "cost of capital" on the upside, but lose their "cost of capital" to the marketplace on the downside, a systematic confiscation of Montana-Dakota's investment capital. That is neither fair, nor lawful.

It is important to emphasize that Mr. Clark did not testify that it was unreasonable or imprudent for Montana-Dakota to develop the Billings Landfill Project. Indeed, no one in this proceeding testified that it was imprudent.¹⁰ The issue in this docket is whether the Billings Landfill Project can be excluded from rate base because the unit cost of gas it produces is more than the market price of gas in the field.

IV. <u>Customer Care and Billing System.</u>

Customer Care and Billing System ("CC&B") is a customer information system ("CIS") developed by Oracle. Direct Testimony of Mr. Michael Gardner ("Gardner Direct"), MDU Ex. 11, at p. 5. The core function of the CIS is to store customer information and render accurate bills to the Montana-Dakota customer. *Id.* It represents a \$22.6 million investment by Montana-Dakota, of which Montana's allocated share is \$4.9 million.

¹⁰ Prudence is presumed, and Montana-Dakota does not have to prove prudence in the absence of a prudence challenge. *West Ohio Gas Co. v. Public Utilities Comm'n of Ohio*, 294 U.S. 63, 72 (1935).

CC&B has been in use since 2010 by Cascade, a gas utility owned by MDU Resources Group, Inc., and doing business in Washington and Oregon. Tr. 188. It was installed on the Montana-Dakota system in 2012, with all code "locked" for testing in October of 2012. Tr. 189. Parallel testing with the old CIS occurred in November, under which the new CC&B was used to prepare bills for the months of September and October for comparison purposes. Rebuttal Testimony of Mr. Michael Gardner, ("Gardner Rebuttal"), MDU Ex. 12. at p. 2. The only reason the system was not used to render actual customer billings in December of 2012 was to satisfy the concerns of the Company's auditors about implementing actual billing under CC&B in the fourth quarter of 2012. MDU Ex. 11, at pp. 8-9; MDU Ex. 12, at p. 2. CC&B was used to prepare actual billings for Montana-Dakota customers beginning in February of 2013. MDU Ex. 11, at pp. 2.

MCC witness Clark proposes to exclude from rate base the entirety of Montana-Dakota's investment in CC&B. MCC Ex. 2, at p. 12. His stated rational is short:

I have removed plant that did not go into service by the close of the allowed adjustment through December 31, 2012. I have also changed the estimated cost of some projects to the actual cost of those projects where the Company provided such information. By far, the largest project that I am removing is the customer information system that did not go into service in 2012.

ld.

The MCC does not contend that CC&B is not being fully utilized at the current time. Its contention is based solely upon its interpretation of the Commission rule governing the presentation of historic test period data in general rate cases, ARM 38.5.106. That rule reads in pertinent part:

Any proposed adjustments to book costs shall be explained in writing. Such adjustments shall be shown separately and shall be fully supported, including schedules showing their derivation, where appropriate. However, no adjustments shall be permitted unless based on changes in facilities, operations, or costs which are known with certainty and measurable with reasonable accuracy at the

time of the filing. No adjustment will be entertained unless it will become effective within 12 months of the last month of the test period as used in this section.

Before delving into a reasonable interpretation and application of the rule in this case, it should be pointed out that the rule does not dictate outcomes in Commission rate orders. It is part of the Commission's Minimum Rate Case Filing Standards for general rate case filings by electric, gas, and privately owned water utilities.¹¹ Those standards simply prescribe what information a utility must provide in a general rate case filing. Importantly, they are subject to waiver: "All or any part of the requirements of these rules may be waived by a quorum of the Commission upon a showing of good cause." ARM 38.5.102(3). See also ARM 38.2.305(1).

The Commission's Minimum Rate Case Filing Standards do not proscribe the filing of additional information, or prohibit a utility from seeking rate treatment in a rate case different than what has been afforded by the Commission in past rate cases. For example, a filing utility could present a fully projected test year in a general rate case filing, and request the establishment of rates on the basis of the fully projected test year, as long as it also provided in its initial filing a historic test year as required by ARM 38.5.106. In other words, it is within the discretion of the Commission to establish rates in this docket which include Montana-Dakota's investment in its CC&B.

The question of whether to include the cost of CC&B in rates in this case is not one which should be resolved by a mechanical or unreasonable application of ARM 38.5.106(1). It should instead be resolved by recognizing that excluding CC&B from rates in this case is not only unfair to Montana-Dakota, but fulfills no meaningful public policy objective. Because of the length of

JA:24-151 -16- OPENING BRIEF

¹¹ "Applications for rate increases exceeding one hundred thousand dollars annually shall include the cost of service to be supplied and shall include the additional material required in ARM 38.5.103 to 38.5.175 and 38.5.179 to 38.5.183, inclusive, minimally." ARM 38.5.102(1).

the proceedings in this case, CC&B will have been the only CIS utilized by Montana-Dakota for more than nine months prior to Commission's final rate order in this case.¹²

Moreover, this is not a case where the inclusion of CC&B in rates in this case would cause a matching problem. Although the costs of CC&B are primarily investment related, there is no possibility of additional revenues being generated by the investment, as there might be in the case of new gas transmission line or electric generating station. MDU Ex. 12 at p. 4. Simply stated, the only reason for excluding CC&B from rates in this case is to delay cost recovery until the next Montana-Dakota rate case. That is not an appropriate exercise of the Commission's discretion. As well stated by the Montana Supreme Court:

An order of a Commission relating to rates or service may be based upon some deficiency of the utility company which might be supplied between the date of the hearing before the Public Service Commission and the date of trial before the district court, which should, of course, be considered by the Commission when the matter is referred to it by the court.... The law seeks to avoid a multiplicity of hearings and suits, eliminate expense and permit a determination of the questions at issue in a fair and prompt manner. The question of determining values and rates is not a matter of catch as catch can, but should be entered into by both parties to the proceeding honestly and fairly.

Tobacco River Power Company v. Public Service Commission, 109 Mont. 521, 531, 98 P. 2d, 8886 (1940) (emphasis supplied). The Court in that case was addressing the issue of using new cost data in a judicial review of a Commission rate order.

Changes to book costs measured in an historic test year are routinely allowed by the Commission when they are:

- (1) "known with certainty and measurable with reasonable accuracy," and;
- (2) "will become effective within 12 months of the last month of the test year."

The Application in this case was filed in September of 2012, and was originally scheduled for hearing in April of 2013. Because of a serious injury to legal counsel for the MCC, the originally scheduled hearing was vacated, and the Commission was unable to reschedule it for hearing until August of 2013. Because of the unfortunate accident to legal counsel for the MCC, the nine month deadline for a Commission decision specified in Section 69-3-302, MCA, was exceeded well before this matter was even heard by the Commission.

ARM 38.5.106. The Company's investment in CC&B meets the criteria of the rule, and including the cost of CC&B in rates in this case falls squarely within any reasonable interpretation and application of the rule.

CC&B was installed and tested in 2012, within the 12 month change period specified in the rule. The cost of CC&B was "measurable with reasonable accuracy" - it was included in the Company's 2012 application for a general rate increase. The only thing that didn't happen in 2012 was the substitution of CC&B for the old CIS in the bill rendering process. That occurred in February of 2013. But, the substitution of the old for the new is not a requirement of ARM 38.5.106. Recognizing the weakness of his argument, Mr. Clark testified for the first time at hearing that CC&B was not "used and useful" because the substitution did not occur until February of 2013. Tr. 413.

Mr. Clark's last minute invocation of the "used and useful" standard does not salvage the merits of his argument. The "used and useful" standard is <u>not</u> a test year or change period standard as Mr. Clark infers. <u>From its first appearance in a Montana-Dakota rate case, the Commission has recognized that an investment is "used and useful" if it will be used during the effective period of the rates being established by the Commission:</u>

It is obvious, in view of the wide variety of standards used by commissions elsewhere, that this Commission must use sound discretion in applying the used and useful standard to the facts presented by the case. In applying the standard to MDU's Coyote investment, the Commission adopts what it considers a liberal standard that allows more rate base treatment than might be allowed if only plant to be used during the test year were included in rate base. The 40 MW adjustment recommended by Hess does not exclude all excess capacity created by the Coyote plant, which, as noted above, is between 46 and 56 MW. This conservative estimate allows for some load growth during the time in which the rates are expected to be in effect if past experience of yearly rate increase requests is repeated in the future.

In the Matter of the Application of Montana-Dakota Utilities Co. To Adopt Increased Rates For Electric Service in the State of Montana, PSC Docket 81.1.2, Order 4799b, Finding of Fact 78.

In that case, the Commission included in rates all of generating capacity of the Coyote generating station which it expected would be used during the period the new rates would be in effect. In this case, CC&B will have been in full use for at least nine months <u>prior</u> to the Commission's issuance of a final rate order in this case, and the establishment of new rates.

V. Depreciation.

Montana-Dakota's proposed depreciation rates were developed and presented by its depreciation expert, Mr. Earl Robinson. Direct Testimony of Earl Robinson, MDU Ex. 13, and Rebuttal Testimony of Earl Robinson, MDU Ex. 14. The MCC's proposed depreciation rates were developed and presented by its depreciation expert, Mr. Jacob Pous. MCC Ex. 3.

While the Company proposed a modest 5 plus percent increase in depreciation expense for the Company's Gas Plant in service, MCC witness Pous is proposing an unreasonable 18.1 percent reduction from the Company's <u>currently approved</u> depreciation levels and a 22.3 percent reduction from the Company's proposed depreciation expense level. With regard to its Common Plant property the Company's depreciation expense is proposed to be reduced by approximately 30 percent. Notwithstanding the Company's proposed substantial depreciation expense reduction relative to the Company's Common Plant in service, MCC witness Pous is proposing an additional 8 percent reduction, for a total 38.1 percent reduction from the Company's <u>currently approved</u> depreciation levels and a 10.9 percent reduction from the Company's proposed depreciation expense level.

Comparison of Depreciation Positions-Gas (\$000)

	Current	MDU ¹³	Pous ¹⁴
Annual Depreciation Expense	\$9,698	\$10,224	\$7,944
MDU's Proposed Depreciation	Expense Increase	5.4%	

¹³ MDU Exhibit EMR-1, Sec 2, Table 1.

¹⁴ Pous Exhibit JP-1, 1 of 2.

Pous Reduction from MDU Presently Approved Depr Expense -18.1%

Pous Reduction from MDU Proposed Depr. Expense -22.3%

Comparison of Depreciation Positions-Common (\$000)

<u>Current</u>	MDU ¹⁵	Pous ¹⁶
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Annual Depreciation Expense \$2,411 \$1,677 \$1,493

MDU's Proposed Depreciation Expense Decrease -30.4%

Pous Reduction from MDU Presently Approved Depr Expense -38.1%

Pous Reduction from MDU Proposed Depr. Expense -10.9%

MCC witness Pous' recommended depreciation reductions are the product of two items:

(1) The use of unreasonable average service lives for selected property groups, and; (2) The

use of unreasonably low net salvage estimates for selected property groups. He proposes alternative depreciation service life parameters for 3 different property groups (2 for Gas Plant

accounts and 1 for Common Plant accounts). The 2 Gas Plant property groups for which he is

proposing alternative longer service lives are Account 376.1 Steel Mains and Account 376.2

Plastic Mains. Relative to the Company Common Plant property group for which MCC witness

Pous is proposing alternative longer service lives is Account 390 Structures and Improvements.

Mr. Pous is recommending far lower negative net salvage for Account 376-Mains; Account 380-Services; and Account 381-Meters. In addition, he is recommending 20% positive net salvage for Common Plant Account 390-Structures and Improvements as compared to the 0% net salvage proposed in the Company's depreciation study Exhibit EMR-2.

All of Mr. Pous' service life proposals are longer than proposed in the Company's depreciation study—none are shorter. Likewise, all of Mr. Pous' net salvage estimates are less negative or more positive thus reducing the Company's proposed depreciation rates.

¹⁵ MDU Exhibit EMR-2, Sec 2, Table 1.

¹⁶ Pous Exhibit JP-1, 2 of 2.

The proposed depreciation parameters as set forth in MDU Ex. 13, internal Exhibits EMR-1 and EMR-2 are reasonable, rational, and supported. Conversely, Mr. Pous' alternative depreciation parameters are simply an effort to significantly reduce not only the Company's proposed depreciation rates but also the Company's approved depreciation rates that were in place at the time of the completion of the 2008 depreciation study. In fact the net aggregate change (inclusive of the Company's Gas and Common Plant) to depreciation expense as a result of applying the Company's proposed depreciation rates to the Company's December 31, 2008 plant in service is an approximate \$200,000 decrease in annual expense. Tr. 247

MDU Gas Service Lives

Based upon an analysis of the historical data of Account 376-Mains, the estimated life of an Iowa 47-R4 life and curve is recommended for this property group. MDU Ex. 13, internal Exhibit__(EMR-1), Table 5, pp. 2-18. This is an increase of 2 years beyond the current underlying average service life of 45 years for this property group. It is anticipated that there will continue to be an ongoing number of relocations with shorter lives due to continued expansion within the Company's service territory; therefore this life estimate may shorten in future years from that currently being recommended.

A factor that needs to be considered with regard to the estimated life and curve for the property group is that, as shown on Mr. Pous' service life curve plottings, in his direct testimony at page 24 for Plastic Mains and page 27 for Steel Mains, the percent of retirements are approximately 12 percent (100%-88% surviving) and 10 percent (100%-90% surviving) for Plastic and Steel Mains, respectively. Only a total of 5.3% of the Company's actual plant investment records have been retired over the life of the property group. MDU Ex. 13, internal Exhibit EMR-1, p.4-4. There is a discrepancy between the Company's plant accounting records (SPR data) and the retirements utilized in Mr. Pous' actuarial calculations. Mr. Pous'

depreciation study curve proposals, S0.5 and R2.5 for Plastic and Steel Mains, based upon his actuarial data analysis, implies higher percentages of property retirements and more left mode or lower subscript survivor patterns than exists within the Company's actual property records.

This circumstance reinforces Montana-Dakota witness Robinson's reservations about the quality/depth of the actuarial data file that existed as of the time when the 2008 depreciation study was completed and why the SPR data file (actual Company accounting records) was deemed to be the best data source for depreciation analysis. MDU Ex. 14 at p. 24.

On page 20 of his testimony, Mr. Pous argues that "many utilities across the country,......have implemented bare steel replacement programs where bare steel is being removed at ages earlier than they would have obtained absent such programs." This statement is misleading, at best, as it relates to the average service life of Mains. While the programs are shortening the property categories <u>average remaining lives</u>, the programs "are not" driving shorter overall average service lives. Bare Steel Mains, in companies where they exist, were installed during the early part of the 20th century and, and such were contributors to longer average service life indications. MDU Ex. 14 at p. 19.

MDU Gas Net Salvage

Mr. Pous argues that Mr. Robinson inappropriately included inflation (between original installation and the time of retirement) in estimating future net salvage. One of the most basic principles in a correctly performed depreciation study is the simple fact there is usually a significant period of time between when plant is first placed in service and when it is removed from service. The Company's cost of removal/retirement always occurs at end of the useful life of the plant being removed from service. There is a clear price level difference between beginning and end of the useful life of plant in service.

Mr. Robinson summarized the basis for his net salvage estimate for Account 376-Mains in his rebuttal testimony::

[T]he three year rolling band experience has varied but generally trended up over time. However, during the most recent four or five years through 2008, some of the yearly negative net salvage averages have been lower. Based upon the current experienced negative net salvage percent reductions, plus giving consideration that over the longer term, the negative net salvage percent will likely increase, a modest reduction was temporarily proposed for the estimated future net salvage percent."

MDU Ex. 14 at p. 23 (emphasis added).

To further validate that the expectation from the study data analysis period was appropriate, net salvage information relative to Account 376-Mains was gathered for the period 2009 through 2012. MDU Ex. 14, internal Exhibit__(EMR-4). The additional year's historical information shows that negative net salvage was in the lower range of 30 plus percent during 2009 and 2010 and then again increased to in excess of negative 50 percent during the most recent years. This additional information demonstrates that the negative net salvage is growing and that the net salvage percent of negative (-50) percent proposed by the depreciation study is reasonable and appropriate.

The Company's net salvage proposal is to move downward from negative (-60%) to negative (-50%), thus reducing annual depreciation rates.

The estimated future net salvage percent for each property group gives consideration to the overall average, recent experience, and forecast analysis. The estimation process is one of gradualism towards more future looking calculations which is more representative of the future net salvage that can be anticipated at end of life of the property group."

MDU Ex. 14 at p. 15. As further explained by Mr. Robinson at hearing:

It explains the process -- the thought process of what we used to analyze the account. We don't do an arithmetic calculation and calculate two numbers and get an average. It's a professional analysis of data for where the range of the data goes and what's weighted the greatest. So it's a gradualism towards more recent data.

Tr. 219.

Account 380-Services has routinely experienced negative net salvage well in excess of negative (-200) net salvage and growing larger. MDU Ex. 14 at p. 24. In the four years since the completion of the 2008 depreciation study used in this case, negative net salvage has continued at levels supporting the negative (-200) percent net salvage:

[N]et salvage information relative to Account 380-Services was gathered for the period 2009 through 2012 and is being provided as Exhibit No. ____(EMR-7). The additional year's historical information shows that negative net salvage was nearly equal to or greater than negative (-200) percent during all 4 subsequent years and averaged approximately negative (-240) percent. This additional information demonstrates that the negative net salvage continues at a high level and that the net salvage percent of negative (-200) percent proposed by the depreciation study is reasonable and appropriate.

MDU Ex. 14 at p. 24.

MDU Common Plant

Relative to Common Plant MCC witness Pous proposes an irrational alternative average service life and net salvage parameters for Account 390 Structures and Improvement of an Iowa 55-R1 life and curve. MCC Ex. 3 at 29. He also proposes a positive 20% net salvage. MCC Ex. 3 at p 43. As explained by Montana-Dakota witness Robinson, various cost components within the Company's historical accounting data (which will be non reoccurring and not representative of the future) needs to be excluded from the historical analysis when developing estimated future depreciation parameters. MDU Ex. 14 at pp. 30-31.

VI. Cost Allocation.

MDU witness Tamie Aberle presented the Company's cost allocations in this docket. Direct Testimony of Tamie Aberle, MDU Ex. 17, Rebuttal Testimony of Tamie Aberle, MDU Ex. 18. MCC witness George Donkin presented the MCC's cost allocation. MCC Ex. 4. Both Montana-Dakota and the MCC determine the cost of providing gas service by function

(customer, demand, and commodity), then allocate those functionalized costs between rate classes. MDU Ex. 17 at pp. 4-8; MCC Ex. 4 at p. 14.

For a natural gas utility like Montana-Dakota, with a Commission approved gas cost tracking adjustment mechanism, the majority of the costs addressed in a general rate case are fixed costs. In turn, 94% of the Company's total distribution investment is in distribution mains, service lines, regulators and meters. MDU Ex. 17 at p. 6. Importantly, such costs do not vary as the amount of gas used by Montana-Dakota's customers increases or decreases.

Montana-Dakota believes that distribution mains should be classified as demand costs, as the investment in distribution mains does not vary by the amount of gas provided to a customer or customer class over an annual period. MDU 17 at 6. Since distribution mains are a fixed cost, it doesn't matter whether a customer uses one or one hundred dekatherms a month, the cost of providing the required distribution main is unchanged. MDU allocates the costs of its distribution mains between rate classes on the basis of coincident peak. MDU Ex. 17 at p. 6. MCC witness Donkin proposes what is sometimes called a Seaboard allocation, an arbitrary 50/50 split of the cost of mains between the demand component and the commodity component of Montana-Dakota's rates. MCC 4 at p. 22.

The MCC's proposed Seaboard allocation has the highly undesirable effect of creating a subsidy for low load factor customers (residential) paid by high load factor customers, invariably business. MDU Ex. 18 at p. 5. Under a Seaboard allocation, high load factor customers are effectively penalized for their efficient use of the distribution system. MDU Ex. 18 at p. 5. The greater the volume of gas sold, the greater the proportion of the fixed cost of distribution mains paid, even though the costs do not vary on the basis of the units sold.

Montana-Dakota believes that the cost of services, regulators, and meters must be treated as customer costs, and allocated between customer classes on the basis of the

weighted installed cost per meter. MDU Ex. 17 at p. 7. The MCC proposes to arbitrarily assign the cost of services, regulators, and meters 50/50 between customer costs and demand costs. MCC 4 at p. 22. The suggested 50/50 split has no theoretical basis. MDU Ex. 18 at p. 6. Every customer needs a service line, regulator, and meter to receive any service at all.¹⁷ The MCC proposal simply is another rate subsidy for small customers, typically residential.

Lastly, the MCC proposes to allocate A &G expense under a *Seaboard* allocation, arguing that most A & G expense is incurred in acquiring and managing the gas supply. MCC 4 at pp. 23-24. Not only is there no factual support for that argument, if true, it would undermine Mr. Donkin's proposal to allocate such costs to interruptible transportation customers, who aren't getting their gas from MDU. MDU Ex. 18 at p. 18.

Predictably, the MCC proposed allocations allocate the cost of service away from the small residential user and burden the larger commercial users. A comparison between the Montana-Dakota proposed and MCC proposed interclass allocation of the required revenue increase is self-explanatory:

	Proposed Revenue	
RATE CLASS	Increase MDU	MCC
Residential	7.94%	5.81%
Small Firm General	3.84%	5.79%
Large Firm General	2.32%	4.91%
Small Interruptible	1.38%	9.29%
Large Interruptible	1.37%	27.40%
Total Montana	5.87%	5.87%

¹⁷ At certain levels of service, a larger meter is required. However, that is captured by using a weighted cost of installed meter in the class allocations.

There is one issue upon which both Mr. Donkin and Ms. Aberle agree - the Commission should no longer require Montana-Dakota to file marginal cost studies in gas general rate cases. MDU Ex. 18 at p. 12. MCC Ex. 4 at P. 11.

VII. Rate Design.

As in the case of cost allocation, the respective positions of the parties were presented by Ms. Aberle on behalf of Montana-Dakota, and Mr. Donkin on behalf of the MCC. Montana-Dakota has requested an increase in the Basic Service Charges. In the case of the Residential Rate 60 the requested increase is from \$6.35 per month to \$.35 per day (\$10.64/month). MDU Ex. 17 at 16. The requested increase in the Basic Service Charge would better align the rate structure of the distribution rates with the fixed costs which dominate the cost of providing distribution service, and would provide more stable revenues in the face of customer conservation. *Id.* at pp. 18-19. The MCC opposes any increase in the Basic Service Charge, MCC -4 at p. 34, even though its own cost allocations support a customer-related charge of \$7.50. MDU Ex. 18 at p. 10.

Using the Residential Rate 60 as an example, and using 86 Dkt as typical annual usage, the rate design proposed by Montana-Dakota in this case would result in a rate increase of \$3.37 per month. MDU Ex. 17 at p. 3. Under the Montana-Dakota proposed rate design, the \$4.29 increase in the Basic Service Charge results in a proposed reduction in Distribution Delivery Charge, from \$1.126/Dkt to \$.998/Dkt.¹⁸

MCC witness Donkin opposes the reduction in the Distribution Delivery Charge proposed by Montana-Dakota. MCC 4 at p. 34. Consistent with the overall philosophy of the MCC, he wants to keep volumetric rates high to subsidize the cost of service to small volume users. MDU Ex. 18 at p. 9. He also argues that lowering the Distribution Delivery Charge

¹⁸ The proposed reduction in the Distribution Delivery Charge increases as the total revenue requirement developed in this case decreases.

sends the wrong price signal and encourages the use of gas. *Id.* However, his argument ignores the fact that the Distribution Delivery Charge is a small component of a total rate structure dominated by the commodity cost of gas, MDU Ex. 18 at p. 9. The commodity cost of gas averages 70% of the total customer bill. *Id.* As the price of gas in the field goes up or down, the "correct" price signals will be provided to the customer.

VIII. <u>Distribution Delivery Stabilization Mechanism</u>.

Montana-Dakota has proposed the implementation of a Distribution Delivery Stabilization Mechanism ("DDSM"). Direct Testimony of Tamie Aberle, MDU Ex. 17 at pp. 19-28. The MCC opposes adoption of the DDSM on the grounds it is a decoupling proposal, disfavored by the Commission. MCC ex. 4 at pp. 34-37.

The DDSM is <u>not</u> a decoupling proposal. Rebuttal Testimony of Tamie Aberle, MDU ex. 18 at p. 10. It is a proposal to weather normalize Montana-Dakota's distribution rates, a proposal which was adopted nine years ago in North Dakota, and eight years ago in South Dakota. MDU ex. 17 at 19-20. It bears repeated emphasis that the costs incurred in distributing gas are primarily fixed. In the absence of a DDSM, fixed cost recovery for a natural gas utility becomes a game of chance. If the weather is colder than normal, the utility over recovers its fixed costs, and customer is the loser. If the weather is warmer than normal, the utility under recovers its fixed costs, and the utility is the loser.

The DDSM is designed to minimize the impact of weather on fixed cost recovery. It does so through an adjustment mechanism based upon heating degree days. MDU Ex. 17 at p. 20. If heating degree days during a customer's service period were less than normal, the distribution component of the bill is adjusted upwards. *Id.* at ___. If the heating degree days are less than normal, the distribution component of the bill is adjusted downwards. *Id.*

JA:24-151 -28- OPENING BRIEF

CONCLUSION

The Commission should establish the revenue requirement in this case as advocated by Montana-Dakota in its testimony. It should design rates to reflect the resulting rate increase in the manner requested by the Company. Its final order in this docket should approve the tariff changes requested by Montana-Dakota, including approval of its proposed Distribution Delivery Stabilization Mechanism.

DATED this 13th day of September 2013.

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Βv

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CERTIFICATE OF SERVICE BY MAIL

I HEREBY CERTIFY that a copy of the foregoing OPENING BRIEF was served upon the following by mailing a true and correct copy thereof on this 13th day of September 2013, addressed as follows:

MONTANA CONSUMER COUNSEL PO BOX 201703 HELENA MT 59620-1703

John Alke

APPENDIX 1

Summary

Cost of Common Equity Return Indicators

DCF Evidence (Average)	
Earnings Growth	8.91%
Dividends Growth	8.08%
Book Value Growth	8.45%
Fundamental DCF	8.96%
CAPM Evidence	6.28%
Comparable Expected Market Earnings	6.65%
Average of Above Measures	7.89%
Indicated Range of Reasonableness	7% - 9%



Summary

Cost of Common Equity Return Indicators

DCF Evidence (Constant Growth)	
Earnings Growth	8.47 - 8.75 %
Dividend Growth	7.11 - 7.77 %
Book Value Growth	8.07 - 8.29 %
Average Constant Growth	7.88 - 8.27 %
Multi-Stage DCF	8.94 - 9.31 %
Fundamental DCF	8.5 - 8.8%
CAPM Evidence	2.96% - 9.59%
Average of Above Measures	7.07 - 8.99 %
Indicated Range of Reasonableness	7.5 % to 8.5 %